Subsea Compression Applications– Panel Session

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José L. Gilarranz R. joined Dresser-Rand in 2002 and is currently the Manager for Technology Development and Commercialization of the DATUM ICS and Subsea Product lines within Dresser-Rand in Houston, Texas. Dr. Gilarranz actively participates in new project development and serves as the main technical and commercial contact between Dresser-Rand and its clients in the area of compact compression systems. Previously, Dr. Gilarranz was a Senior Aero/Thermo Engineer and was heavily involved in the design, specification and use of advanced instrumentation for development testing. He has also been engaged in shop and on-site testing of centrifugal compression packages for both dry and wet gas applications.
Prior to joining Dresser-Rand, Dr. Gilarranz worked as a rotating Equipment Engineer for Lagoven S. A. (now Petróleos de Venezuela - PDVSA) where his primary responsibility was performance evaluation and prediction for compression packages utilized by Lagoven in Lake Maracaibo.
Dr. Gilarranz received a B.S. (Cum Laude) in Mechanical Engineering (1993) from the Universidad Simón Bolívar in Caracas, Venezuela and an M.S. (1998) and Ph.D. (2001) in the area of experimental fluid mechanics from Texas A&M University. He is a member of ASME, AIAA and ΦΚΦ.

William Maier is a Principal Development Engineer with Dresser-Rand Company based in Olean, New York. He has been with the company since 1980. His latest activities are centered on advanced subsea compression and separation systems.
Mr. Maier has co-authored and presented papers at numerous technical conferences including SYMCOM, ASME IGTI, and TAMU Turbo-Symposium and currently holds twenty four US Utility Patents. He received a B.Sc. degree from Rochester Institute of Technology in Mechanical Engineering in 1981.

Mr. Baumann has a diploma (Mechanical Engineering, 1987) from the Swiss Federal Institute of Technology in Zurich. During his master studies he focused on control systems and strategies as well as on system reliability.
Between 1988 and 1996, Mr. Baumann worked for Sulzer Innotec, the Corporate Research and Development Center of Sulzer Ltd. For several years he was in charge of the machinery dynamics group that is responsible for the development, design improvement and troubleshooting on a wide range of Sulzer products.
In 1996 Urs Baumann joined MAN Diesel & Turbo, Switzerland. During the first four years he was responsible for the mechanical development of the compressors built in Zurich. Since 2000 Urs Baumann is the Manager of the Calculation and Development department of MAN Diesel & Turbo in Zurich. His responsibilities include the aerodynamic and mechanical development of turbocompressors and associated components, as well as the implementation and maintenance of test stands and analytical tools needed to perform this task. His department comprises also a Product Development Group mainly focusing on high-speed motor driven, magnetically suspended compressors..

Mr. McKee has ten years of mechanical engineering experience, with 7 years in the subsea oil and gas industry. His project experience as a subsea systems engineer includes large, deepwater field system designs, electrically heated flowlines/pipelines, coiled tubing blockage remediation for flowlines, and subsea Arctic system design. He is currently Planning and Development Manager, assisting with INTECSEA's strategic business initiatives, including subsea processing, and is responsible for development of the annual INTECSEA / Offshore Magazine subsea processing posters.

Francesco Bongini is a Systems Engineer for Subsea Compression inside the Advanced Technology Organization at GE Oil&Gas. Based in Florence, Italy.
He has a M.S. degree in Mechanical Engineering from the University of Florence, Italy. After 8 years in the automotive industry, in 2010 he joined GE O&G as NPI program manager, and in 2011 appointed as NPI Systems Engineer for the subsea compression productline.

Manuele Bigi is responsible for the Subsea Compression development in the Advanced Technology Organization of GEOil&Gas in Florence, Italy.
He has a M.S. degree in Mechanical Engineering from University of Florence, Italy and more than ten years of experience in Oil&Gas turbomachinery design.

Mr. Pål E. Hedne Has previously worked 10 years at SINTEF with multiphase flow R&D and pipeline transportation systems
Joined Statoil in 1997 and has a broad experience as advisor and leader within transport technology, flow assurance, and process control. Has through the last years been heavily engaged in Statoil's work with subsea processing and is today Technical Manager in Statoil's project portfolio within subsea gas compression.

ABSTRACT

The use of Subsea gas compression technology for subsea re-injection and/or gas transport boosting represents a new and exciting application for rotating equipment, which will allow new gas/condensate field production opportunities, enhanced recovery of existing gas/condensate fields and cost effective production from marginal gas fields.

This panel session includes short presentations on the benefits of subsea compression, an overview of currently ongoing projects, and recent advances and technologies that are available and/or under development for subsea gas compression.

The panel session includes presentations from STATOIL, INTECSEA, MAN DIESEL & TURBO, GE OIL & GAS and DRESSER-RAND. The respective presentation titles are:

- DATUM I Compressor for Subsea Applications: Update on Qualification Efforts- Dresser-Rand
- HOFIM^{TM} Type Compressors for Subsea Applications – MAN Diesel & Turbo
- Improving Recovery with Subsea Compression – INTECSEA
- GE Oil & Gas Experience in Subsea Gas Compression technology Development – GE Oil & Gas
- Realization of Subsea Gas Compression – Statoil